













Vol.9 No.1  
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# FOOD PATENTS

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Central Food Technological  
Research Institute, Mysore—570 013  
(C.S.I.R., India)

National Information System for  
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# **FOOD PATENTS**

**Vol.9 No.1**  
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**National Information Centre for Food Science and Technology**  
**Central Food Technological Research Institute,**  
**Mysore — 570 013, India**







## CONTENTS

ENGINEERING AND EQUIPMENT	...	1
PRESERVATION AND PACKAGING	...	7
CHEMISTRY AND ANALYSIS	...	10
FOOD ADDITIVES	...	10
CEREALS AND MILLETS	...	12
PULSES, OILSEEDS AND NUTS	...	13
TUBERS, VEGETABLES AND FRUITS	...	14
SUGAR, STARCH AND CONFECTIONERY	...	14
BAKERY PRODUCTS	...	15
MILK AND DAIRY PRODUCTS	...	15
MEAT, FISH AND POULTRY	...	17
FRUIT JUICES AND SOFT BEVERAGES	...	18
FATS AND OILS	...	20
SPICES AND CONDIMENTS	...	21
DIETETIC AND PROTEIN FOODS	...	22
MICROBIOLOGY AND FERMENTATION (including Alcoholic Beverages)	...	23
INFESTATION CONTROL AND PESTICIDES	...	25
WASTE UTILISATION	...	28



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## ENGINEERING AND EQUIPMENT

- 1 Microingredient-containing tracer

MICRO TRACERS INC

Europe 198 426 (April 1985)

- 2 An electrically driven slicer and grater

RAJINDER NATH

India 156 795 (November 1985)

The slicer and grater has a plate member to which different sets of blades or grates may be removably attached. The plate can be coupled to a driving shaft running at a slow speed.

- 3 A multipurpose electrical kitchen device

RAJINDER NATH

India 156 794 (November 1985)

A kitchen machine that can be operated at high and low speed has been described. Using various attachments, it is possible to use the machine (i) blending and liquidising fluids, (ii) grinding, (iii) slicing and grating, (iv) mincing of meat, (v) kneaking of dough, and (vi) juice extraction

- 4 Apparatus for transfer of liquid and removal of gases from liquids

RICHTER GEDEON VEGYESZEKTI GYAR RT

India 156 769 (November 1985)

The device described in this patent consists of a chamber with an impeller, and a well which has inlet and outlet parts. It enables one to remove gases that separate from the liquid and to deliver gases simultaneously, without additional apparatuses, accessories, etc. The machine has favourable operating characteristics, and requires very little space.



## 5 A wet grinder

TA VIJAYAN

India 156 308 (June 1985)

This wet grinder has, as its bottom, a flat stone with a shallow, circular pit in its middle. An inner circular stone, which can be lifted up, fits inside the pit. Another cylindrical stone, having a drive shaft which can be rotated by an electrical motor, is placed on top of this inner circular stone. The grain gets crushed between the cylindrical stone and the inner circular stone. An opening is provided to drain out the ground material.

## 6 Slow cooking cooker

PRESSURE COOKER APPLIANCES LTD

India 156 626 (September 1985)

The slow cooker described here has an outer casing of mild steel and an inner casing of aluminium, and a tubular, electrical heating element just below the inner vessel. The space between the two vessels is filled with some insulating material (e.g. glass wool). A cooking pot, made of stainless steel, is placed inside the inner casing, having a small air-gap between the two. The rim of the cooking pot is bent over the rim of the inner and outer vessels. This whole assembly is covered with a glass lid which permits inspection of the food being cooked. Electrical energy can be supplied at a slow rate so that the food in the pot is cooked over a period of 3 to 8 hours.

## 7 A flour mill

ELECTRO-MECH ENGINEERING

India 156 623 (September 1985)

A flour mill of the under-runner type (i.e. the lower stone is rotated, while the upper stone remains fixed) has been described. Means are provided for (i) axial adjustment of the shaft, so as to adjust the gap between the stones; (ii) adjusting the size of the slot through which grain from the hopper passes into the mill; (iii) rotating stirrer which adjusts the slot, as the shaft rotates; and (iv) an electric motor to drive the shaft.



- 8 Improvements in or relating to a three roll mill, such as sugarcane mill

JYOTI PRASAD MUKHARJI

India 156 339 (June 1985)

The invention relates to the drive system of a three-roll mill such as a sugarcane or sugarbeet. Important features of the new drive system are: (i) elimination of secondary forces and friction due to misalignment of the centre lines of the top roll, tail bar, and last motion gear wheel shaft; and (ii) making available more torque for crushing or milling the sugarcane.

- 9 A filtration apparatus

PRESSURE COOKERS AND APPLIANCES LTD

India 157 272 (February 1986)

The filtration apparatus is a pressure cooker with a modified cover or lid. The lid has a vent valve (as usual), and is also fitted with a candle filter extending downwards from the lid and terminating a little above the base of the cooker vessel. The candle filter is surrounded by a separator tube which keeps it away from contact with steam. When water in the cooker is brought to boiling point, the steam pressure pushes water up the separator tube and through the candle, so that it comes out at the top of the lid and is discharged through a regulatory valve and discharge tube. A silencer may also be fitted to the discharge tube.

This type of apparatus has a much faster filtration rate than the common two-chamber water filter. It also prevents contamination of the filter candle and removes bacteria and poisonous spores; growth of bacteria during filtration is also avoided.

- 10 A filtration apparatus

PRESSURE COOKERS AND APPLIANCES LTD

India 157 26 (February 1986)

The apparatus consists of a vessel with an electrical heater (immersion type) fitted near its bottom. The vessel is covered tightly by a lid provided with a vent tube, and fitted with a filter pad in the form of a sintered glass or a metal disc. The pad is separated from the steam within the vessel by a long vertical tube which terminates near the base of the vessel. When the water in the vessel is brought to boiling-point (which may be 122°C at 15 p.s.i.) the water rises up the vertical tubes, passes through the filter and is discharged

through a discharge tube which may be fitted with a silencer. The vessel may be an ordinary pressure cooker with an additional modified lid (as described above) for boiling and filtering water.

11 An improved candle for water filter

TAMHANKAR RL

India 156 345 (June 1985)

The improved candle is an inverted hollow disc, made of porous ceramic material and filled with activated charcoal, or any other known deodorizing materials, and cemented rigidly to the bottom plate of an upper vessel having a hole in its bottom. Water stored in the upper vessel flows through the candle and passes through the hole in its bottom, into the lower vessel.

12 A grinding cum batch-mixing, kneading, and blending machine

MATHIAS BP

India 156 347 (July 1985)

The machine described in this patent comprises of a rotatable, cylindrical vessel supporting a bottom stone, and a top annular stone which is placed above the bottom stone and is carried by a stationary scraper assembly. Such a machine can be made in many different sizes, suitable either for domestic use, or for use in light, medium, and heavy industries. It can be used for grinding chillies, onions, garlic, etc., or for grinding chemicals, ores and other substances, either to a dry powder or to a very thick paste.

13 A electric pressure cooker

TT PVT LTD

India 156 707 (October 1985)

This is a pressure cooker which has a tubular heating coil (immersion heater type) fitted near its bottom. It is also fitted with an automatic timing device which cuts off the power supply after a certain period of time. A support for the cooking vessels within the cooker is also provided.

14 Spraying apparatus

MICRONAIR AERIAL LTD

India 156 599 (September 1985)



A low volume sprayer for spraying agricultural chemicals and also insecticides and insect repellents has been described. It consists essentially of a rotary atomiser coupled to an axial fan, as described in IP 152 956. The machine described in this patent has been made more compact and can be carried by one person on his back, or moved by him on a trolley. The fan is driven either hydraulically or pneumatically.

15 Pressure cookers

PRESSURE COOKERS APPLIANCES LTD

India 157 275 (February 1986)

The well-known "Hawkins" pressure cooker has a cylindrical hollow body, the top portion of which is in the form of an inwardly directed tip having an oval (or elliptical) opening. It has an oval lid with a flange that is curled upwards. Within the flange there sits a rubber gasket. When the cooker is closed, the flange of the lid presses against the lower, or inner, surface of top. The lid has a slight upward arch, so as to form a dome of height 1.27 cm (or half an inch). A long flexible bar attached to the lid has a handle of insulating material attached to its outer end, while the opposite end is extended across the lid and bent downwards so as to nearly touch the upper top of the body. Thus, it is practically impossible to force the lid open while there is pressure in the cooker.

16 Spraying apparatus

MICRONAIR AERIAL LTD

India 156 600 (September 1985)

The apparatus comprises a rotary atomiser and an axial fan coupled to the atomiser to form a rotatable unit therewith. The atomizer has three valves equally spaced around the axis of rotation of the cylinder, and a perforated diffuser tube placed concentrically between the spindle and the foraminous cylinder. The axial fan is situated within an aerodynamically shaped cowl. It is suitable for low-volume spraying of chemicals, such as those required as aids to growing crops; and also for spraying of insecticides and insect repellents to control flies, mosquitoes, and locusts.

17 Improvements in or relating to a continuous vapour absorption refrigeration system

BHARAT HEAVY ELECTRICALS LTD

India 157 112 (January 1986)

The new system is an ammonia-water refrigerating system in which two crucial units - viz the rectifier and the absorber - have been redesigned to function more effectively. Such a system is suitable for cold storages and for ice-making, using low grade thermal. (90 C) available as industrial waste, or harnessed from solar energy. The system is claimed to be both cheap and efficient.

- 18 A process for preparing a pigment and a food utensil coated with such pigment

FERRO CORPORATION

India 142 842 (September 1977)

The pigment is, principally, a system containing a rutile-type lattice, preferably titania, and colour-inducing metal oxides within the lattice, consisting essentially of an oxide of columbium (niobium) and an oxide of a transition element like Na, Cr, Co, Mn, or V. Each of these transition element oxides provides a different colour in combination with the rutile type lattice. The molar ratio of the columbium oxide to the transition element oxide should be within the range 0.2 to 5.0

- 19 An improved apparatus for continuous and immediate supply of hot water and milk

SUDHIR MALHOTRA

India 156 748 (October 1985)

The apparatus consists of an inner vessel placed inside a larger outer vessel, with the intervening space between the two vessels being packed with heat insulating material. An immersion heater, controlled by a thermostat, heats water inside the inner vessel. The lid of the latter is fitted with a bottle support on which a glass bottle can be mounted upside down. A bent outlet pipe fitted with a tap passes through the lid. Milk inside the glass bottle is heated by steam from the vessel, through a hole in the centre of the lid.

- 20 Apparatus for producing a restructured food product from small pieces of said product

FRYDAY CORPN

India 156 813 (November 1985)

The apparatus consists of: a) means for comminuting small pieces of meat to form a fluid paste; (b) pairs of platens that form a hold to hold the paste; (c) means to inject the paste into the moulds at high pressure; (d) means to maintain the



pressure in the moulds above a given level; (e) means to heat the platens, so that the meat in the mould cavity is rapidly and uniformly cooked; (f) means to remove the cooked product from the moulds. The end-product has the texture and consistency of a single chunk of cooked meat.

## PRESERVATION AND PACKAGING

- 21 Dry instant food composition

STALEY AE MFG CO

United States, 4 623 549 (February 1986)

- 22 Method for thermally processing plastic food containers

AMERICAN CAN CO

Europe 192 354 (January 1985)

- 23 Separable papers for steamed foods

TAISHOW SHIKO SANGYO CO LTD

Japan 61 192 249 (May 1984)

- 24 An improved leak-proof container

MEERA METAL INDUSTRIES

India 156 627 (September 1985)

An ordinary container with a covering lid (which has to frequently opened can be made leak-proof by providing out-turn beedings on the tip of the container and on the lid tip. The portion of the container body below the beading of the tip is tapered. When the lid is placed on the container, two beadings press against each other, and provide a leak-proof contact. The wall of the container body and the top face of the lid are provided with projecting rings as reinforcements.

- 25 Resilient container for packaging of products, and method of manufacturing the same

S.E.A.B.s.a.

India 156 129 (May 1985)

"Goatskin bag" type of containers, for holding liquid, powdery, or granulated products, are being made from a tubular film of plastic, and are in daily use (e.g. for packaging of milk). As the bags currently in use are difficult to grasp and handle, the inventor has described how a tongue of thermoplastic material, of the same type as the tubular plastic film, can be incorporated into one of the sealing welds of the bag.

- 26 Process of and apparatus for forming tubular thermoplastic articles

METAL BOX LTD

India 156 443 (August 1985)

A can for packing of food, or carbonated beverages, has been designed such that its body is made of a tube of thermoplastic material which is at least in part - biaxially oriented. The biaxial orientation makes the body of the can very strong and resistant to overpressures. The ends may be made of tinplate or aluminium; and one of the ends may be of the easy-opening type, with either a restricted opening (for carbonated beverages) or a "full aperture" type of opening for products like processed foods.

- 27 A package for packaging of materials

ROLLATAINERS LTD

India 157 391 (March 1986)

A single-walled package for non-liquid materials has been designed in such a way as to prevent ingress of moisture into the package. It consists of side walls and end walls made of any relatively stiff material (like cardboard) having a polycoating applied to it. The package also has a diaphragm formed from a polycoated paper sheet, provided with the end walls.

- 28 Improvements in or relating to disposable pilfer-proof bags or containers

BUELL GD

India 145 432 (October 1978)

A pilfer-proof, hygienic and flexible bag (made of polythene or a similar material) has been designed which is easy to carry as well as easy to open. The sealed tips of one mouth surround a ripping or tearing means (e.g. cord, tag, etc) extending on one or both sides of the bag, to a sufficient length, to enable a person to hold the cord and carry the bag or container conveniently.



- 29 Improved cap closure or stopper for bottles and like containers  
SHANA BK

India 143 048 (September 1977)

The improved closure is a metal-jacketed screw cap made of thermoplastic material which is leak-proof. It is easy to manufacture, but difficult to break or deform. It consists of a thermoplastic cap push fitted into a metallic jacket. The cap has screw threads on its inner wall, a series of vertical ridges on the outer wall and a circular raised bead on the bottom end of the outer wall.

- 30 A metal plug lid for a metal container and the combination of a container with such a lid

METAL BOX CO LTD

India 143 590 (December 1977)

Known metal plug lids which fit into cylindrical metal containers cannot be prised open in one simple movement, but have to be levered up at several places before being taken off. This difficulty is avoided, if the lid comprises a closure disc joined by a peripheral side wall to a flange; the side wall should have an annular portion of convex cross-section adapted for engagement with the mouth of the container along a circumferential line of contact, and a second annular portion radially inwards from the first.

- 31 A pouch and the manufacture thereof

UNISYSTEMS PVT LTD

India 156 836 (November 1985)

The pouch described herein is made from a laminate consisting of an inner sheet that is thermoweldable (e.g. polyethylene or polypropylene) and an outer sheet (e.g. metallic foil) that can be printed. It is made in such a way that it can stand upright on its specially constructed bottom. The pouch may be used for storing liquid or solid edible materials.

- 32 Process of producing packaging covers for containers from stalks/stems of water hyacinth

SWAPAN KUMAR

India 156 988 (December 1985)

Where stalks or stems of the waterhiacinth are dried in the sun, or artificially, they develop good cushioning and shock-absorbing characteristics. They may then be woven into sleeves or mats and used for packing glass bottles containing wine, provision, cosmetics etc. Various procedures for drying water hiacinth stems have been described in the patent.

#### CHEMISTRY AND ANALYSIS

33. Quantitative determination of B-carotene

SEPITKA ANDREJ AND OTHERS

Czech 228 461 (May 1980)

34. Method and apparatus for determining the concentrates of components of liquid systems

LION LABORATORIES LTD

Europe 193 683 (January 1985)

#### FOOD ADDITIVES

35. Preservatives for food

KUBUN CO LTD

Japan 61 192 275 (February 1985)

36. Sweeteners

AJINOMOTO CO INC

Japan 61 177 963 (January 1985)

37. Sweetener from new stevia species

MORITA KAGAKU KOGYO CO LTD

Japan 61 202 667 (March 1985)



- 38 Modified plant fiber additive for foods  
UNITED STATES DEPARTMENT OF AGRICULTURE  
United States 809 803 (December 1985)
- 39 Natural benzaldehyde and acetaldehyde compositions, and  
organoleptic utilities therefor  
INTERNATIONAL FLAVORS AND FRAGRANCES INC  
United States 4 617 419 (September 1985)
- 40 Protein food additives  
KROKOSKOVA BERNADETTA AND OTHERS  
Czech 224 0904 (July 1980)
- 41 Emulsifying agents for food  
YAKULT HONSHA CO LTD  
Japan 61-199 749 (March 1985)
- 42 A method of producing a flavour composition for flavouring tea  
DOUWE EGBERTS  
India 156 447 (August 1985)

Flavoured teas are being prepared by sprinkling an oily flavour compound directly on to the leaf tea. But the flavour is quickly lost, unless the tea is packed air-tight; further, the flavour can deteriorate in the presence of air. Hence, the author proposes to manufacture a flavoured leaf tea by mixing the tea with a flavour composition which is encapsulated in a water-soluble, non-volatile carrier (e.g. gum arabic). The flavour composition can then be agglomerated with tea dust to a particle size suitable for mixing with leaf tea.

- 43 Process for extracting, concentrating and purifying natural  
aromas of plant origin  
COMPAGNIE FRANCAISE DE REFFINAGE SA  
India 156 246 (June 1985)

A method for the extraction, concentration, and purification of natural aromas of plant origin - e.g. from fruits, vegetables, seeds, etc - has been described. First, the aroma-

tic compounds are extracted by a solvent, and a large part of the solvent is removed by distillation until, the boiling point of the aroma substance/solvent mixture rises above the b.p. of the pure solvent. At this stage, the residual solvent is removed by stripping with an inert gas, and the natural aroma is recovered in a substantially pure state.

## CEREAL AND MILLETS

### 44 A combined rice aspirator and sieve

BINNY LTD

India 157 202 (February 1986)

The combined rice aspirator and sieve comprises: (a) a feed for housing several baffles and a feed roller; (b) several fixed baffle plates in staggered array (c) a suction fan to draw air through the fixed baffle plates; (d) a screw conveyor for conveying the germs and immature grains out; (e) a sieving unit having perforated screen trays housed in a tray box, reciprocating with the aid of a cam arrangement, and (f) separator outlets for broken rice and head rice. The final product (head rice) is free from bran, germ, and immature grains.

### 45 Apparatus for the removal of bran from rice and like cereal grains

RIVIANA FOOD INC

India 157 562 (April 1986)

A new rice milling machine of the friction type has been designed in which the rice grains are polished by the grains rubbing against one another, while abrasive action by the rotor and the screen on the grains is minimized, and wear and tear (i.e. smoothening) on the rotor and screen are minimized.

It consists of a milling rotor placed within an apertured screen. This grain processing chamber is open at the ends; the grain to be milled enters at one end, and comes out at the other end, due to the application of a controlled pressure in the longitudinal direction with respect to the rotor. The rotor is so constructed that it carries rice grains in pockets around its periphery. These grains are then polished mainly by friction between themselves and the rice grains filling the space between the rotor and the screen.



- 46 Use of specific enzyme complexes for pressure-less starch decomposition process in grain distillation

VEB KOMBINAT SPIRITUOSEN, WEIN AND SEKT VEB BAERENSIEGEL BERLIN  
East Germany 236 109 (April 1985)

- 47 Saccharification of triticales mash

VEB BAERENSIEGEL BERLIN

East Germany 235 667 (March 1985)

### PULSES, OILSEEDS AND NUTS

- 48 Improvements in a method for preparing fermented sunflower meal

ENI ENTE NAZIONALE IDROCARBURI

India 156 567 (August 1985)

Sunflower can be made to undergo a lactic fermentation by first adjusting its pH to a value between 4. and 5.5, and then incubating it at 30-40 C for 24 h. Fermented sunflower meal has a chemical composition similar to that of ordinary sunflower meal; the only notable difference is its higher content of the amino acids lysine, cystine, and phenylalanine which makes it nutritionally superior.

- 49 Calcium-enriched aseptic soybean curd

MEIJI MILK PRODUCTS CO LTD

Europe 193 250 (February 1985)

- 50 Soybean milk

UKRAINIAN SCIENTIFIC-RESEARCH INSTITUTE OF THE MEAT AND DAIRY INDUSTRY

USSR 1 253 572 (JULY 1984)

- 51 Improved method for and an apparatus for abrading or cracking or perforating epicarp of arecanut

DAPOLI ENGINEERING CO

India 157 141 (January 1986)

## FRUITS AND VEGETABLES

- 52 Extracting carotene from carrots and the resulting carotene concentrate

AROMES DE BRETAGNE SA

World 86 04 059 (January 1985)

- 53 Increasing the germanium content in vegetables for maintaining freshness

GERMAX CO LTD

World 86 05 354 (March 1985)

- 54 Dehydration of potato starch

HOKUREN NOGYO KYODO KUMIAI RENGOKAI

Japan 61 213 202 (March 1985)

- 55 Manufacture of dehydrated sliced apples

HYAKUSE TAKAO

Japan 61 216 641 (March 1985)

## SUGAR, STARCH AND CONFECTIONERY

- 56 A bagasse dryer

RAHA AC

India 157 252 (February 1986)

The bagasse dryer comprises a long cylindrical chamber with a helicoidal scroll attached to its inner surface, all along the length of the cylinder. As the cylinder rotates, the bagasse sent in at one end, is moved forward by the scroll to the opposite end of the cylinder. Buckets are provided between the spaces of the helicoidal scroll, to raise the bagasse as the cylinder turns, and spray it over the scroll. The falling bagasse is dried by a blast of hot air or gas sent in from the opposite end of the chamber. This type of dryer is not only efficient, but also prevents any damage to the bagasse.



- 57 Crystallization of fructose  
TATE AND LYLE PLC  
Europe 195 610 (March 1985)
- 58 Starch hydrolyzates and high fructose syrups  
CPC INTERNATIONAL INC  
United States 4 596 776 (February 1984)

#### BAKERY PRODUCTS

- 59 Improvement of dough with emulsifier-bound glutens  
KYOWA HAKKO KOGYO CO LTD  
Japan 61 162 172 (January 1985)
- 60 An automatic chapati making machine  
SHREE GAJJAR ENGINEERING WORKS  
India 156 618 (September 1985)

The machine has a housing inside which one finds: a) a flour dough flattening unit, consisting of at least two pairs of rollers; (b) a rotating drum on which the belt of dough from the rollers falls and is moved forward to a cutter; (c) a cutter which cuts out circular chapatis from the belt of dough; (d) a dry flour sprinkler; and (e) a drive unit. A plastic scraper is provided for each pair of rollers. A hopper (perhaps detachable) is also provided for feeding in flour dough. The clearance between one pair of rollers and the next pair can be made adjustable.

#### MILK AND DAIRY PRODUCTS

- 61 Acidified dairy product concentrate for gelification and whipping of acidified milk desserts  
LAITERIES E BRIDEL  
France 2 563 700 (May 1984)

- 62 Arginine-containing milk powder  
SNOW BRAND MILK PRODUCTS CO LTD  
Japan 61 192 245 (February 1985)
- 63  $\gamma$ -Linolenic acid-supplemented milk  
AGENCY OF INDUSTRIAL SCIENCES AND TECHNOLOGY: NITTO ELECTRIC  
INDUSTRIAL COMPANY LTD  
Japan 61 224 932 (March 1985)
- 64 Method and apparatus for processing whey and/or permeate from a  
cheese-working process  
ANHYDRO AS  
World 86 03 942
- 65 Entrainment of exogenous materials in cheese curds  
GENENCOR INC  
Europe 188 067 (January 1985)
- 66 Process for producing water-free milk fat  
VEB KOMBINAT FORTSCHRITT  
India 156 853 (November 1985)  
  
Cream with a fat content preferably between 40% and 55% and a temperature of 0-10 C; is mechanically processed in the beater cylinder of a continuously operating machine for butter production. The operational parameters are so selected that the material to be processed continues to be treated mechanically beyond the stage of butter-grain formation which creates the general fatty phase - and the complete binding of water by the fat. The liquid product so formed is conveyed to a continuously operating, separating stage. After separation, the water content of the milk fat is only 0.3-0.6%
- 67 Processing apparatus used in a butter-making machine  
VEB KOMBINAT FORTSCHRITT OF LANDMESCHINEN NEUSTADT IN SACHSEN  
India 156 871 (November 1985)



Conventional butter-making machines consist of a shaft, fitted with beater blades, rotating within a cylinder. This type of machine result in a non-uniform product, and a high fat content in the buttermilk. These disadvantages can be overcome by reducing the internal diameter at the outlet end of the cylinder. The processed cream then accumulates to form a uniformly thick layer and can pass out only by crossing the overflow edge of the weir that has formed.

#### 68 Improved electric ice cream making machine

RAVI KUMAR GOEL

India 156 741 (October 1985)

The machine consists of two plastic buckets (an outer and an inner) and a freely rotatable metal container at the centre of the inner bucket. The space between the two buckets is filled with a mixture of ice and salt. A pedal is inserted in the metal container, its lower end touching the bottom of the container. An electric motor housed in a plastic covering and having three extended arms is placed on top of the container, with the arms resting on the top of the bucket. The upper end of the pedal fits into the motor shaft. When the motor is operated, about half a litre of milk inside the container is converted to ice-cream in 20-30 mins

#### 69 Improvements in or relating to a method for the prolonged storage of "maska" or the solid contents obtained from curds

RAM PRAKASH ANEJA

India 157 049 (January 1986)

"Maska" or "chakke" are the terms used in India to designate curd solids. Maska is prepared during the winter, when milk production is high, and is used for the manufacture of "shrikhand" in summer. A process for freezing the "maska" and storing it at -5 to -20 C. has been described. Frozen "maska" can be kept fresh for atleast six months, to meet the summer demand for "shrikhand"

### MEAT, FISH AND POULTRY

#### 70 A process for the production of an edible material

MARS GP LTD

India 156 426 (July 1985)

Meat analogues, comprising proteinaceous material dispersed in, and bound together by, a thermo-irreversible gelled aqueous phase, can be produced by employing a gelling system which consists of a mixture of at least one glucomannan and at least one carrageenan. The product retains its shape and structure when heated, and may contain flavouring and colouring agents, as well as humectants and fungistats. Unlike alginates and pectates, this gelling system does not need to be treated with divalent or polyvalent ions which can spoil the taste of the product. The pH of the system has between 5 and 8.

- 71 A method of producing a restructured food product from small pieces of said food product

FRYDAY CORPN

India 156 848 (November 1985)

Less valuable meat parts are normally minced (or comminuted) and converted into products like hamburger, luncheon meat, and sausages. This patent describes a method of treating such comminuted meat so as to obtain an end-product having the texture of a whole meat chunk. This is achieved by first comminuting the meat to form a paste that can flow. The paste is then injected into a mould cavity under a high pressure (2100 psi) while keeping the walls of the mould at a high temperature (88-101 C), so as to cause rapid cooking of the meat paste.

- 72 Preservation of fresh meat

MITSUBISHI GAS CHEMICAL CO INC

Japan 60 221 031 (April 1984)

- 73 Collagen sausage casing

DEVRO INC

United States 4 615 887 (June 1985)

#### FRUIT JUICES AND BEVERAGES

- 74 Filtration of beverages

MARTIN LUTHER UNIVERSITÄT HALLE WITTENBERG

East Germany 235 887 (March 1985)



- 75 Process for the manufacture of sweet carbonated beverage

SOCIETE GENERALE DES EAUX MINERALES DE VITTEL

India 157 107 (January 1986)

In this process, the carbondioxide required for the formation of gas bubbles is formed "in situ" as a result of an alcoholic type of fermentation of sugar by yeast. The fermentation is stopped - either by pasteurization or by cooking to 5 C - when about 15% of the weight of the initial sugar has been converted into alcohol. After cooking, the liquid is subjected to plate filtration to reduce the yeast concentration from 10 to 10 cells per litre. After filtration, the desired amount of fruit juice, flavouring ingredients, are introduced into the liquor. The solution to be fermented may also contain some fruit juice at the outset.

- 76 Preparation of carbonated beverage using active charcoal with adsorbed carbon dioxide

GENERAL FOODS CORP

Japan 56 60 630 (October 1979)

- 77 An electrically driven centrifugal juice extractor

RAJINDER NATH

India 156 841 (November 1985)

The juice extractor consists of a centrifuge bowl with a conical sheeve, made of a mesh material, disposed within it, such that two chambers (an inner and an outer) are formed within the bowl. The extractor can either be made as an accessory to be attached to an existing kitchen machine, or may have its own separate motor to drive it at 5000 rpm.s sliced fruits or vegetables are placed in the conical chamber. When the machine is started the sliced material is chipped into small particles by the serrations on a plate within the cone and then impacted with force against the wall so that the juice is forced out.

- 78 Process for making a vegetable extract

SOCIETE DES PRODUITS NESTLE SA

India 156 638 (September 1985)

The process has been designed more particularly for the preparation of a soluble coffee from a mixture of coffee and coffee substitutes. An extraction liquid (e.g. water, or a

dilute coffee extract) is made to pass through a series of cells containing coffee and coffee substitutes (e.g. chicory, malt, and barley) so as to effect a countercurrent extraction of the vegetable material. The cycle time is 30-75 mins. The extract is then spray dried, or freeze-dried, and finally agglomerated to give a soluble coffee powder.

79 Caffeine separation from activated carbon

HAG GF AG

West Germany 3 511 129 (March 1985)

#### FATS AND OILS

80 Improvements in or relating to oil expeller

JYOTI LTD

India 156 625 (September 1985)

An improved oil expeller of the traditional "ghani" type has been described. It comprises: (i) a wooden conical bowl with an opening at the bottom; (ii) a cylindrical ram with a spherical bottom revolving within the aforesaid bowl; (iii) a spout below the bottom opening, with a hemispherical inner surface to support the bottom of the ram; and (iv) a spindle connecting the ram to a means for rotating the said ram. The spindle may be rotated either electrically or manually. It may also be spring-loaded, so that the pressure on the ram can be adjusted.

81 A process for the production of hydrocarbons from vegetable oils

INDIAN SPACE RESEARCH ORGANIZATION

India 143 962 (March 1978)

Vegetable oils (both edible and non-edible), or their mixtures, can be converted into gaseous and liquid hydrocarbons by heating them to temperatures in the range of 300-700 C, in the presence of certain catalysts. The catalysts consist of a silica-alumina base which is impregnated with the oxides of transition metals belonging to groups IV B, V B, VI B, and VIII of the periodic table. 95% of the liquid hydrocarbons obtained have a b.p. below 400 C. The fractions are: (i) 30-60% boiling at 200 C. (ii) 10-30% boiling at 200-250 C (iii) 5-20% boiling at 250-300 C and (iv) 20-40% boiling at 300-400 C



- 82     Antioxidation edible fats and oils  
       QP CORP  
       Japan 61 212 243 (March 1985)
- 83     Readily emulsifiable oil compositions  
       MITSUBISHI CHEMICAL INDUSTRIES CO LTD  
       Japan 61 162 133 (January 1985)
- 84     Symmetrical triglycerides  
       UNILEVER PLC  
       Europe 199 580 (April 1985)
- 85     A method for the regeneration and use of spent adsorbent beds  
       of a series of adsorption beds in the process of refining fats  
       HINDUSTAN LEVER LTD  
       India 156 223 (June 1985)

Confectionery fats - especially sal fat - one purified by passing a solution of the fat in a solvent repeatedly through a set of adsorption columns. When the last adsorbent column, or bed, is also spent, the first bed of the series is rejuvenated by bringing it into contact with an azeotropic mixture of hexane and isopropyl alcohol, and use the rejuvenated bed as the last bed in the series. The second, third, etc., beds may also be rejuvenated and reused in their turn. Rejuvenation and reuse may be continued until the adsorbent beds finally become useless.

#### SPICES AND CONDIMENTS

- 86     Extraction of spicy substances from curry powder  
       SEITETSU CHEMICAL INDUSTRY CO LTD  
       Japan 61 209 567 (March 1985)

- 87 Culinary seasoning composition  
HOWARD FOUNDATION  
World 86 05 660 (March 1985)
- 88 Acidic liquid seasonings  
QP CORP  
Japan 61 219 354 (March 1985)
- 89 Manufacture of highly transparent soy sauce  
KIKKOMAN CORP  
Japan 61 199 761 (February 1985)
- 90 Prevention of vinegar contamination with *Moniliella acetoab-*  
*tans*  
NAKANO VINEGAR CO LTD  
Japan 61 192 279 (February 1985)

#### DIETETIC AND PROTEIN FOODS

- 91 Health food containing octacosanol and pantothenic acid  
NIPPON OILS AND FATS CO LTD  
Japan 61 216 659 (March 1985)
- 92 Health food containing inositol and  $\gamma$ -oryzanol  
TSUKINO SHOKUHIN KOGYO CO LTD  
Japan 61 192 264 (February 1985)
- 93 Taurine from marine animals for health foods  
AMANO PHARMACEUTICAL CO LTD  
Japan 61 152 648 (December 1984)



- 94 A process for producing single cell protein

IMPERIAL CHEMICAL INDUSTRIES LTD

India 156 056 (May 1985)

Production of single cell protein or growth of any microbial culture, or even a tissue culture, is often slowed down by varieties in the concentration of carbon source (i.e. available energy) in the culture medium. The inventor has, therefore, designed a system wherein the culture medium flows along a pre-determined pathway, and comes in contact with a carbon source at one or more points, so that there is only a negligible variation in the concentration of the carbon source within the medium.

#### MICROBIOLOGY AND FERMENTATION

- 95 A process for the production of yeast extract for food, pharmaceutical, and fermentation industries.

THE INDIAN YEAST CO LTD

India 157 237 (February 1986)

Yeast cake (from baker's, distiller's, or brewer's yeast) with a moisture content of 29-30% is treated with alcohol 6-15% of its weight in a stainless steel vessel. The mash is agitated at 36-37 C for 8-24 h, so that half of the total N in the yeast is converted to  $\alpha$ -amino N. The temperature of this mash is then raised to 45-50 C for 20-30 h, till a special flavour develops in the autolysed slurry. The slurry is then held at 88-92 C for 0.5 - 2.0 hours to de-activate the enzymes, and then clarified in yeast separators to a dry matter concentration of 15-20%. The concentrated slurry is then diluted and centrifuged till more than 90% brights are recovered. The brights are evaporated under vacuum, at a temperature less than 70 C, to obtain a concentrated yeast extract. This concentrated extract is finally spray-dried, or else chilled to 4-5 C so that the yeast extract crystallizes out. Salt may be added (at a level of 10-12% by wt.) at any of the processing steps prior to spray-drying or crystallization.

This new process, which has been tried out on a pilot-plant scale, yields a standard quality yeast extract with a unique flavour and colour.

- 96 L-Phenylalanine from phenylpyruvic acid by microbial transamination  
MITSUI TOATSU CHEMICALS INC  
Japan 61 195 696 (February 1985)
- 97 L-Phenylalanine by enzymic hydrolysis of its racemate derivative in a two-phase system  
FUJI PHARMACEUTICAL INDUSTRIES CO LTD  
Japan 61 152 294 (December 1984)
- 98 L Tryptophan manufacture by genetically engineered alcaligenes faecalis  
TANABE SEIYAKU CO LTD  
Japan (February 1985)
- 99 Fermentative production of L-isoleucine  
MITSUBISHI PETROCHEMICAL CO LTD  
Japan 61 177 993 (January 1985)
- 100 Manufacture of oligo- and polyfructane from sucrose by Aspergillus  
JAPAN MAIZE PRODUCTS CO LTD  
Japan 61 87 797 (February 1985)
- 101 Alcohols by enzyme-catalyzed reduction of aldehydes  
UNITED KINGDOM ATOMIC ENERGY AUTHORITY  
Britain 2 168 344 (December 1984)
- 102 Low alcoholic content beverage  
ALLIED CORP  
United States 4 617 127 (May 1985)

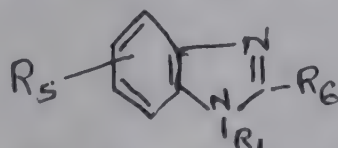


- 103 Yield-enhancers for hop  
WAGENBRETH, DIETMAR AND OTHERS  
East Germany 236 666 (April 1978)
- 104 Brewing process  
WHITBREAD AND CO LTD  
Europe 189 657 (December 1984)
- 105 Cabbage wine manufacture  
AKIYAMA, TAKASHI  
Japan 61 187 778 (February 1985)
- 106 Iron removal from wine by tannin copolymers  
TANABE SEIYAKU CO LTD  
Japan 61 149 078 (December 1984)

#### INFESTATION CONTROL AND PESTICIDES

- 107 Process for preparing new benzimidazole derivatives  
CHINOIN GYOGYOZER ES VEGYESZETI TERMÉKEK GYARA RT  
India 145 082 (August 1978)

Benzimidazole derivatives having the general formula:



have been synthesized by reacting, say 2-amino-benzimidazole with an aldehyde, preferably 5-nitro-furfuraldehyde, or a reactive derivative thereof, preferably in an organic solvent, like acetic anhydride, at room temperature or with mild heating. Such compounds can be used so active ingredients in pharmaceutical compositions, agricultural chemicals, cosmetic products or pesticides.

## 108 Applicator apparatus for pest control agents

DR WERNER FREIBERG CHEMISCHE FABRIK DELITRIA NACHF

India 156 296 (June 1985)

The applicator can be used for pest control work in buildings, stores, silos, storage bins, etc. It uses a pesticidal formulation which generates phosphine gas when it comes in contact with atmospheric moisture. Its novel feature is an elongate, flexible holder which contains the pesticide subdivided into a large number of separate portions which are physically separated from one another and are contained in a multitude of pockets or sackets made of gas permeable material. The sackets can fold over the another, and can be accommodated in a gas proof and moisture proof covering. Thus, exposure of operators to the fumigant can be avoided.

## 109 Seed disinfectants

HOKKO CHEMICAL INDUSTRY CO LTD

Japan 61 189 206 (February 1985)

## 110 A process for the preparation of an insecticidal compound

FMC CORPORATION

India 146 625 (July 1979)

This invention relates to a process for the preparation of new, insecticidal stryln and substituted-styryl-cyclopropane carboxylates which are useful in agriculture to protect crops and animals, and are also useful to control household pests.

## 111 Process for the preparation of new phosphoric esters derived from 1,2,4-triazole, having an insecticidal, nematocidal, and acaricidal action

MONTEDISON

India 146 908 (October 1979)

Preparation of esters of pentavalent phosphorus, derived from new 5-hydroxy (or mercapto) - 1,2,4,-triazoles substituted in positions 1 and 3 of their nucleus, have been found useful in the fight against orthoptera, aphides, diptera, coleoptera, lepidoptera, acari, and nematode.

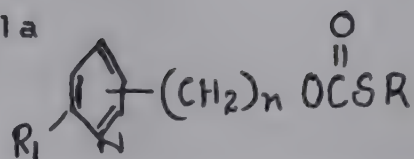


- 112 A method for the production of novel pyridylalkyl thiocarbonates

STAUFFER CHEMICAL CO

India 156 649 (September 1985)

Compounds having the general formula



have been prepared by reacting an appropriate pyridyl alkanol with an appropriate chlorothioformate, at a temperature 0 and 25 C, and in the presence of a solvent (e.g. methylene chloride) and a hydrogen chloride acceptor (e.g. sodium bicarbonate). Such compounds are useful as insect repellents, particularly for repelling flying insects from lighting and/or feeding.

- 113 Industrial fungicides

KATAYAMA CHEMICAL WORKS CO. LTD

Japan 61 118 303 (November 1984)

- 114 Aminopyrimidine fungicides

VEB FAHLBERG LIST

East Germany 236 667 (May 1984)

- 115 Dithiocarbamate fungicides

VEB CHEMIKOMBINAT BITTERFELD

East Germany 236 669 (May 1985)

- 116 Guanidine fungicides

SKW TROSTBERG AG

West Germany 3 606 294 (March 1985)

- 117 Antifungal substances and compositions containing them

MERCK AND CO INC

Europe 157 553 (March 1984)

## WASTE UTILISATION

- 118 An improved method of treating lignocellulosic materials, such as hard woods, bagasse, and the like, to increase the accessibility of cellulose contained therein to rumen bacteria, enzymes, micro organisms and the like

PATRICK FOODY

India 156 846 (November 1982)

The inventor has tried to find an improved method of breaking down lignocellulosic material so that it becomes more susceptible to attack by rumen bacteria, enzyme, etc. The treated material can then be processed further to produce animal feed, or even sugar. The improvements comprise: (a) a well defined formula that specifies the optimal cooking time for maximum cellulose accessibility, (b) venting of volatiles prior to atmospheric decompression, and (c) addition of acid catalysts to increase yields.

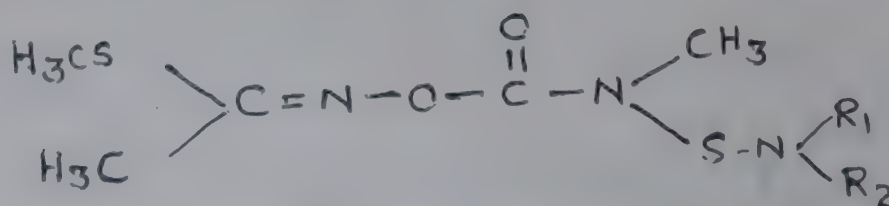
- 119 A process for preparing S-methyl N-(N-methyl-N-(N,N distributed aminosulphenyl) cartomoyl)-oxylthio acetamide derivative

OTSUKA CHEMICAL CO LTD

India 156 965 (December 1985)

The compound in question has the general formula:

It is comparable to methonyl in insecticidal activity, but its toxicity to warm-blooded animals is only 1/5 to 1/50 of methonyl toxicity.





## INDEX

- Acaricides** - See Pesticides
- Additives**  
 benzaldehyde compositions, natural, USA 39/87  
 food, plant fibre additive for, USA 38/87  
 protein food additives, Czechoslovakia 40/87
- Adsorption**  
 fats, adsorption beds for refining, India 85/87
- Alcoholic beverages**  
 beverage, low alcoholic content, USA 102/87
- Alcohols**  
 aldehydes enzyme-catalysed reduction for alcohol production, UK 101/87
- Aldehydes**  
 alcohol production, aldehydes enzyme-catalysed reduction for, UK 101/87  
 natural benzaldehyde compositions, USA 39/87
- Aminopyrimidine fungicides** - See Pesticides
- Analytical techniques**  
 beta carotene, quantitative determination of, Czechoslovakia 33/87  
 liquid concentrates, determination apparatus of, Europe 34/87  
 liquid concentrates, determination method of, Europe 34/87  
 tracer, microingredient containing, Europe 1/87
- Antioxidants**  
 fats, antioxidation of, Japan 82/87  
 oils, antioxidation of, Japan 82/87
- Apples**  
 manufacture of dehydrated sliced apples, Japan 55/87
- Areca nut**  
 improved abrading method for areca nut pericarp, India 51/87  
 improved cracking method for areca nut pericarp, India 51/87  
 improved perforating method for areca nut pericarp, India 51/87
- Arginine**  
 milk powder, arginine-containing, Japan 62/87
- Aroma**  
 concentration of natural plant aroma, India 43/87  
 extraction of natural plant aroma, India 43/87  
 purification of natural plant aroma, India 43/87
- Bags**  
 manufacture of pouches, India 31/87
- Benzimidazole derivatives** - See Pesticides
- Beta Carotene** - See Carotenoids
- Beverages**  
 filtration of beverages, GDR 74/87
- Blending**  
 kitchen machine, multipurpose, India 12/87
- Bran**  
 rice, bran removal apparatus from, India 45/87
- Brewing**  
 process for brewing, Europe 104/87
- Butter making**  
 processing apparatus for butter making machine 67/87
- Cabbage**  
 wine manufacture from cabbage, Japan 105/87
- Caffeine**  
 activated carbon for caffeine extraction, FRG 79/87
- Calcium**  
 soybean curd, calcium-enriched aseptic, Europe 49/87
- Carbonated beverages**  
 manufacturing process for sweet carbonated beverages, India 75/87  
 preparation of carbonated beverages, Japan 76/87
- Carotenoids**  
 beta carotene, quantitative determination of, Czechoslovakia 33/87  
 carrots, carotene extraction from, World 52/87
- Carrots**  
 carotene extraction from carrots, World 52/87
- Celluloses**  
 lignocellulosic materials, improved treatment method for, India 118/87
- Centrifugation**  
 juice extractor, electrically driven centrifugal, India 77/87
- Chapaties**  
 automatic chapati making machine, India 60/78
- Cheese**  
 exogenous material entrainment in cheese curds, Europe 65/87
- Coffee extracts**  
 caffeine extraction, activated carbon for, FRG 79/87  
 preparation process for coffee extracts, India 78/87
- Collagen**  
 sausage casing, collagen 73/87
- Comminution**  
 grater, electrically driven, India 2/87  
 grinder, wet, India 5/87  
 kitchen, electrical device for, India 3/87  
 restructured food product, production apparatus of, India 20/87  
 slicer, electrically driven, India 2/87
- Concentration**  
 aroma, concentration of natural plant, India 43/87  
 liquid concentrates, determination apparatus of, Europe 34/87  
 liquid concentrates, determination method of, Europe 34/87
- Condiments**  
 seasoning composition, culinary,

b

- World 87/87  
seasonings, acidic liquid, Japan  
88/87
- Containers  
bottles, improved cap closure for,  
India 29/87  
food packaging, resilient container  
for, India 25/87  
improved disposable pilfer proof  
bags, India 28/87  
improved leak proof container, India  
24/87  
metal plug for container,  
India 30/87  
packaging covers for containers,  
India 32/87  
plastic food containers, thermal  
processing method for, Europe  
22/87  
single walled package for non liquid  
materials, India 27/87  
tubular thermoplastic containers,  
forming apparatus for, India  
26/87
- Cooking  
electric pressure cooker, India  
13/87  
pressure cookers, India 15/87  
slow cooking cooker, India 6/87
- Crystallisation  
fructose, crystallisation of, Europe  
57/87
- Curd  
maska, prolonged storage method for,  
India 69/87  
soybean curd, calcium-enriched  
aseptic, Europe 49/87
- Curry  
spicy substances extraction from  
curry powder, Japan 86/87
- Cutting  
apples, manufacture of dehydrated  
sliced, Japan 55/87  
grater, electrically driven, India  
2/87  
kitchen, electrical device for, India  
3/87  
slicer, electrically driven, India  
2/87
- Czechoslovakia  
additives, protein food 40/87  
beta carotene, quantitative  
determination of 33/87
- Dehydration - See Drying
- Desserts  
acidified milk products as desserts,  
France 61/87
- Disinfectants  
seed disinfectants, Japan 109/87
- Dithiocarbamate fungicides - See  
Pesticides
- Dough  
emulsifier-bound gluten, dough  
improvement with, Japan 59/87
- Dried foods  
instant food composition, dry, USA  
21/87
- Dryer - See Drying
- Drying  
apples, manufacture of dehydrated  
sliced, Japan 55/87  
bagasse dryer, India 56/87  
potato starch, dehydration of, Japan  
54/87
- Emulsification  
oils, readily emulsifiable, Japan  
83/87
- Emulsifiers  
dough improvement with  
emulsifier-bound gluten, Japan  
59/87  
food, emulsifying agents for, Japan  
41/87
- Enrichment  
soybean curd, calcium-enriched  
aseptic, Europe 49/87
- Enzymes  
grain distillation, enzyme couples  
and pressureless starch  
decomposition in, GUR 46/87
- Equipment  
butter making machine, processing  
apparatus for 67/87  
chapati making machine, automatic,  
India 60/78  
continuous supply apparatus for hot  
water, India 19/87  
cooker, electric pressure, India  
13/87  
cooker, slow cooking, India 6/87  
cookers, pressure, India 15/87  
filtration, apparatus for, India  
10/87  
filtration, apparatus for, India  
9/87  
grater, electrically driven, India  
2/87  
icecream making machine, improved  
electric, India 68/87  
juice extractor, electrically driven  
centrifugal, India 77/87  
kitchen machine, multipurpose, India  
12/87  
kitchen, electrical device for, India  
3/87  
liquids, gas removal from, India  
4/87  
liquids, transfer apparatus for,  
India 4/87  
mill, flour, India 7/87  
pest control agents, applicator  
apparatus for, India 108/87  
rice, bran removal apparatus from,  
India 45/87  
rice, combined aspirator and sieve  
for, India 44/87  
slicer, electrically driven, India  
2/87  
spraying, apparatus for, India  
14/87  
spraying, apparatus for, India  
16/87  
sugarcane mill, improvements of,  
India 8/87  
tracer, microingredient containing,  
Europe 1/87  
tubular thermoplastic containers,  
forming apparatus for, India  
26/87  
whey, processing apparatus for,  
World 64/87
- Europe  
antifungal substances, composition  
for 117/87  
brewing, process for 104/87  
cheese curds, exogenous material



entrainment in 65/87  
fructose, crystallisation of 57/87  
liquid concentrates, determination  
apparatus of 34/87  
liquid concentrates, determination  
method of 34/87

soybean curd, calaium-enriched  
aseptic 49/87  
tracer, microingredient containing  
1/87

triglycerides, symmetrical 84/87

#### Extraction

aroma, extraction of natural plant,  
India 43/87  
caffeine extraction, activated carbon  
for, FRG 79/87  
carrots, carotene extraction from,  
World 52/87  
coffee extracts, preparation process  
for, India 78/87  
curry powder, spicy substances  
extraction from, Japan 86/87  
oil expeller, improvements to, India  
80/87  
yeast extract, production process  
for, India 95/87

#### Fats

adsorption beds for refining fats,  
India 85/87  
antioxidation of fats, Japan 82/87

#### Fats milk

production process for water-free  
milk fat, India 66/87

#### Fermentation

fermented sunflower meal, improved  
preparation method for, India  
48/87

#### Fibre

food, plant fibre additive for, USA  
38/87

#### Filtration

apparatus for filtration, India  
10/87  
apparatus for filtration, India  
9/87  
beverages, filtration of, GDR  
74/87  
water filter, improved candle for,  
India 11/87

#### Flavourings

tea, flavouring composition for,  
India 42/87

#### France

desserts, acidified milk products as  
61/87

#### Fructose

crystallisation of fructose, Europe  
57/87  
preparation of high fructose syrup,  
USA 58/87

#### Fruit juices

electrically driven centrifugal  
juice extractor, India 77/87

#### German Democratic Republic

beverages, filtration of 74/87  
grain distillation, enzyme couples  
and pressureless starch  
decomposition in 46/87  
triticale mash, saccharification of  
47/87

#### Germanium

vegetables, germanium content  
increase in, World 53/87

Germany, Federal Republic of  
caffeine extraction, activated carbon  
for 79/87

#### Gluten

dough improvement with  
emulsifier-bound gluten, Japan  
59/87

#### Grain alcohols

enzyme couples and pressureless  
starch decomposition in grain  
distillation, GDR 46/87

#### Grinding

kitchen machine, multipurpose, India  
12/87

#### Guanidine fungicides - See Pesticides

#### Health foods

inositol, health foods containing,  
Japan 92/87  
marine animal taurine, health foods  
from, Japan 93/87  
octacosanol, health foods containing,  
Japan 91/87  
pantothenic acid, health foods  
containing, Japan 91/87  
Y-oryzanol, health foods containing,  
Japan 92/87

#### Hydrocarbons

vegetable oils, hydrocarbon  
production process from, India  
81/87

#### Hydrolysis

phenylalanine, enzymic hydrolysis  
production of, Japan 97/87

#### Ice cream

improved electric icecream making  
machine, India 68/87

#### India

arecanut pericarp, improved abrasing  
method for 51/87  
arecanut pericarp, improved cracking  
method for 51/87  
arecanut pericarp, improved  
perforating method for 51/87  
aroma, concentration of natural plant  
43/87  
aroma, extraction of natural plant  
43/87  
aroma, purification of natural plant  
43/87  
bags, improved disposable pilfer  
proof 28/87  
benzimidazole derivatives,  
preparation process for 107/87  
bottles, improved cap closure for  
29/87  
chapati making machine, automatic  
60/78  
coffee extracts, preparation process  
for 78/87  
container, improved leak proof  
24/87  
containers, packaging covers for  
32/87  
cooker, electric pressure 13/87  
cooker, slow cooking 6/87  
cookers, pressure 15/87  
dryer, bagasse 56/87  
fats, adsorption beds for refining  
85/87  
fermented sunflower meal, improved  
preparation method for 48/87  
filtration, apparatus for 10/87

filtration, apparatus for 9/87  
 food packaging, resilient container  
 for 25/87  
 grinder, wet 5/87  
 hot water, continuous supply  
 apparatus for 19/87  
 icecream making machine, improved  
 electric 68/87  
 insecticides, preparation of 119/87  
 insecticides, preparation process for  
 110/87  
 juice extractor, electrically driven  
 centrifugal 77/87  
 kitchen machine, multipurpose 12/87  
 kitchen, electrical device for 3/87  
 lignocellulosic materials, improved  
 treatment method for 118/87  
 liquids, gas removal from 4/87  
 liquids, transfer apparatus for  
 4/87  
 meat analogue, production process for  
 70/87  
 milk fat, production process for  
 water-free 66/87  
 mill, flour 7/87  
 non liquid materials, single walled  
 package for 27/87  
 oil expeller, improvements to 80/87  
 pest control agents, applicator  
 apparatus for 108/87  
 phenylalanine, microbial  
 transamination production of  
 96/87  
 phosphoric esters, Preparation  
 process for new 111/87  
 pigment, utensil coated with 18/87  
 pouches, manufacture of 31/87  
 pyridylalkyl thiocarbonates,  
 production method for 112/87  
 refrigeration system, improvement to  
 vapour absorption 17/87  
 restructured food product, production  
 apparatus of 20/87  
 restructured products, production  
 process for 71/87  
 rice, bran removal apparatus from  
 45/87  
 rice, combined aspirator and sieve  
 for 44/87  
 single cell protein, production  
 process for 94/87  
 slicer, electrically driven 2/87  
 spraying, apparatus for 14/87  
 spraying, apparatus for 16/87  
 sweet carbonated beverages,  
 manufacturing process for 75/87  
 tea, flavouring composition for  
 42/87  
 tubular thermoplastic containers,  
 forming apparatus for 26/87  
 vegetable oils, hydrocarbon  
 production process from 81/87  
 water filter, improved candle for  
 11/87  
 yeast extract, production process for  
 75/87  
**Inositol**  
 health foods containing inositol,  
 Japan 92/87  
**Insecticides** - See Pesticides  
**Instant foods**  
 dry instant food composition, USA.  
 21/87

**Iron**

wine iron removal by tannin  
 copolymers, Japan 106/87

**Isoleucine**

microbial production of isoleucine  
 99/87

**Japan**

apples, manufacture of dehydrated  
 sliced 55/87  
 cabbage, wine manufacture from  
 105/87  
 carbonated beverages, preparation of  
 76/87  
 disinfectants, seed 109/87  
 emulsifier-bound gluten, dough  
 improvement with 59/87  
 food, emulsifying agents for 41/87  
 food, preservatives for 35/87  
 fungicides, industrial 113/87  
 inositol, health foods containing  
 92/87  
 marine animal taurine, health foods  
 from 93/87  
 meat, preservation of fresh 72/87  
 milk powder, arginine-containing  
 62/87  
 milk,  $\alpha$ -linoleic acid supplemented  
 63/87  
 new stevia species, sweetener from  
 37/87  
 octacosanol, health foods containing  
 91/87  
 oils, antioxidation of 82/87  
 oils, readily emulsifiable 83/87  
 oligofructane, microbial production  
 of 100/87  
 pantothenic acid, health foods  
 containing 91/87  
 phenylalanine, enzymic hydrolysis  
 production of 97/87  
 seasonings, acidic liquid 88/87  
 soy sauce, manufacture of highly  
 transparent 89/87  
 steamed foods, separable papers for  
 23/87  
 sweeteners, preparation of 36/87  
 tannin copolymers, wine iron removal  
 by 106/87  
 tryptophan, manufacture of 98/87  
 Y-oryzanol, health foods containing  
 92/87

**Kneading**

kitchen machine, multipurpose, India  
 12/87

**Lignocellulosic materials** - See Celluloses**Linoleic acid**

milk,  $\alpha$ -linoleic acid supplemented,  
 Japan 63/87

**Meals**

improved preparation method for  
 fermented sunflower meal, India  
 48/87

**Meat**

preservation of fresh meat, Japan  
 72/87  
 restructured food product, production  
 apparatus of, India 20/87

**Microorganisms**

isoleucine, microbial production of  
 99/87  
 oligofructane, microbial production  
 of, Japan 100/87



- phenylalanine, microbial transamination production of, India 96/87
- phenylalanine, enzymic hydrolysis production of, Japan 97/87
- vinegar contamination, microbial prevention of 90/87
- Milk**
- arginine-containing milk powder, Japan 62/87
- continuous supply apparatus for hot water, India 19/87
- desserts, acidified milk products as, France 61/87
- production process for water-free milk fat, India 66/87
- r-linoleic acid supplemented milk, Japan 63/87
- soybean milk, Preparation of, USSR 50/87
- Milling**
- flour mill, India 7/87
- sugarcane mill, improvements of, India 8/87
- Mixing**
- kitchen machine, multipurpose, India 12/87
- Nematocides** - See Pesticides
- Oils**
- antioxidation of oils, Japan 82/87
- improvements to oil expeller, India 80/87
- readily emulsifiable oils, Japan 83/87
- Oligofructane**
- microbial production of oligofructane, Japan 100/87
- Packaging**
- containers, packaging covers for, India 32/87
- non liquid materials, single walled package for, India 27/87
- resilient container for food packaging, India 25/87
- steamed foods, separable papers for, Japan 23/87
- Pantothenic acid**
- health foods containing pantothenic acid, Japan 91/87
- Paper**
- steamed foods, separable papers for, Japan 23/87
- Pesticides**
- aminopyrimidine fungicides 114/87
- applicator apparatus for pest control agents, India 108/87
- benzimidazole derivatives, preparation process for, India 107/87
- composition for antifungal substances, Europe 117/87
- dithiocarbamate fungicides, GDR 115/87
- fungicides, industrial, Japan 113/87
- guanidine fungicides, FRG 116/87
- insecticides, preparation of, India 119/87
- insecticides, preparation process for, India 110/87
- phosphoric esters, Preparation process for new, India 111/87
- production method for, India 112/87
- Phenylalanine**
- enzymic hydrolysis production of phenylalanine, Japan 97/87
- microbial transamination production of phenylalanine, India 96/87
- Phosphoric esters** - See Pesticides
- Pigments**
- utensil coated with pigment, India 18/87
- Plastics**
- forming apparatus for tubular thermoplastic containers, India 26/87
- thermal processing method for plastic food containers, Europe 22/87
- Polyfructaned**
- microbial production of oligofructane, Japan 100/87
- Potato**
- dehydration of potato starch, Japan 54/87
- Preservatives**
- preservatives for food, Japan 35/87
- Presevation**
- meat, preservation of fresh, Japan 72/87
- Processing**
- butter making machine, processing apparatus for 67/87
- whey, processing apparatus for, World 64/87
- whey, processing method for, World 64/87
- Protein products**
- meat analogue, production process for, India 70/87
- restructured products, production process for, India 71/87
- Proteins**
- additives, protein food, Czechoslovakia 40/87
- Purification**
- aroma, purification of natural plant, India 43/87
- Pyridylalkyl thiocarbonates** - See Pesticides
- Refining**
- fats, adsorption beds for refining, India 85/87
- Refrigeration**
- improvement to vapour absorption refrigeration system, India 17/87
- Rice**
- bran removal apparatus from rice, India 45/87
- combined aspirator and sieve for rice, India 44/87
- Saccharification**
- triticale mash, saccharification of, GDR 47/87
- Sausages**
- collagen sausage casing 73/87
- Seasonings** - See Condiments
- Single cell protein**
- production process for single cell protein, India 94/87
- Slicing** - See Cutting
- Soy sauces**

f

- soy sauce, Japan 89/87
- Soybean**  
calcium-enriched aseptic soybean curd, Europe 49/87  
Preparation of soybean milk, USSR 50/87
- Spices**  
curry powder, spicy substances extraction from, Japan 86/87
- Starch**  
grain distillation, enzyme couples and pressureless starch decomposition in, GDR 46/87  
triticale mash, saccharification of, GDR 47/87  
potato starch, dehydration of, Japan 54/87  
preparation of starch hydrolysates, USA 58/87
- Steaming**  
separable papers for steamed foods, Japan 23/87
- Storage**  
maska, prolonged storage method for, India 69/87
- Sugarcane**  
improvements of sugarcane mill, India 8/87
- Sunflowers**  
improved preparation method for fermented sunflower meal, India 48/87
- Sweeteners**  
new stevia species, sweetener from, Japan 37/87  
preparation of sweeteners, Japan 36/87
- Tannins**  
wine iron removal by tannin copolymers, Japan 106/87
- Tea**  
flavouring composition for tea, India 42/87
- Triglycerides**  
symmetrical triglycerides, Europe 84/87
- Triticale**  
saccharification of triticale mash, GDR 47/87
- Tryptophan**  
manufacture of tryptophan, Japan 98/87
- Union of Soviet Socialist Republics  
soybean milk, Preparation of 50/87  
United States of America  
benzaldehyde compositions, natural 39/87  
food, plant fibre additive for 38/87  
high fructose syrup, preparation of 58/87  
instant food composition, dry 21/87  
starch hydrolysates, preparation of 58/87
- Vegetable juices**  
electrically driven centrifugal juice extractor, India 77/87
- Vegetable oils**  
hydrocarbon production process from vegetable oils, India 81/87
- Vegetables**  
germanium content increase in vegetables, World 53/87
- Vinegar**  
microbial prevention of vinegar contamination 90/87
- Water**  
continuous supply apparatus for hot water, India 19/87  
improved candle for water filter, India 11/87
- Whey**  
processing apparatus for whey, World 64/87  
processing method for whey, World 64/87
- Wine**  
cabbage, wine manufacture from, Japan 105/87  
tannin copolymers, wine iron removal by, Japan 106/87
- World**  
carrots, carotene extraction from 52/87  
seasoning composition, culinary 87/87  
vegetables, germanium content increase in 53/87  
whey, processing apparatus for 64/87  
whey, processing method for 64/87



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